

# APPENDIX A: TECHNICAL NOTES

## SCOPE OF THE SURVEY

The FY 2003 Survey of Research and Development Expenditures at Universities and Colleges (academic R&D expenditures survey) was sent to 630 institutions of higher education in the United States, Guam, Puerto Rico, and the U.S. Virgin Islands. These institutions have doctoral programs in science and engineering (S&E), are historically black colleges or universities (HBCUs), or are master's or bachelor's degree-granting institutions that expend at least \$150,000 in separately budgeted R&D in S&E.

The survey population was reviewed before data collection began to ensure that each institutional classification was accurate. Characteristics of the schools were reviewed before and during the course of the survey to determine whether changes had occurred (e.g., highest degree granted; school openings, closings, or mergers).

The survey also collected information on R&D from each of the nation's 36 federally funded research and development centers (FFRDCs). Of these 36 FFRDCs, 16 are administered by academic institutions, 16 are administered by nonprofit organizations, and 4 are administered by industrial organizations.

To qualify for the survey, an FFRDC must be engaged in basic or applied research, development, or management of R&D activities, and the results of these activities must be directly monitored by the federal government (usually a single agency) in a relationship expected to be maintained on a long-term basis. The center must be operated, managed, and administered as an autonomous organization or as an identifiable separate operating unit of its parent institution. Finally, 70 percent or more of the center's financial support must be received from the federal government. Although the same survey form (NSF Form 411) is used to collect data from both academic institutions and FFRDCs, FFRDCs were asked to provide only item 1 data, their R&D expenditures by source of funding. The FFRDC R&D data are included in tables 63–65.

## FY 2003 SURVEY FRAME DESIGN

The academic R&D expenditures survey is a census of the full population of eligible academic institutions. Before FY 1998 a census of eligible institutions was conducted about every 5 years; during

intervening years eligible institutions were sampled. Since then, a census has been conducted annually. NSF also conducts a population review each year to ensure that all institutions that meet the inclusion criteria are surveyed. This review is based on the survey frame design developed in FY 1998:

- All S&E doctorate-granting institutions and all HBCUs are surveyed.
- All S&E master's and bachelor's degree-granting institutions that reported at least \$150,000 in separately budgeted R&D expenditures in S&E in the previous fiscal year are surveyed. NSF contacts master's and bachelor's degree-granting institutions that were not in the population of the previous census to determine whether they meet the \$150,000 expenditure criterion. Institutions with a minimum of \$150,000 are added to or retained in the survey population.

In FY 2003 NSF conducted a population review using the criteria listed above. As a result, the overall number of institutions surveyed increased from 661 in FY 2002 to 666 in FY 2003 (table A-1).

## SURVEY INSTRUMENT

Most major R&D performing institutions have incorporated the data that are needed to complete this survey into their record-keeping systems, thereby ensuring a consistent format from one year to the next. Such consistency yields the most useful statistics for time series. As a rule, information to complete this survey is found in the institutions' year-end accounting records.

The survey consists of seven main items.

**Item 1** is a request that institutions report their total current expenditures for separately budgeted S&E R&D expenditures by source of funds. Schools are also asked to provide the percentage of total expenditures and the percentage of federally financed expenditures that are considered basic research. Also included are research funds for which an outside organization, educational or other, is a subrecipient.

Care should be taken when interpreting data on source of funds. Industry R&D support is limited to grants and contracts for R&D activities from profit-making organi-

zations. Total industry funds excludes research funded through unrestricted accounts and from corporate foundations, endowments, and fellowships to students; those funds would be included in an institution's own funding totals. An increasing number of institutions have links with industry and foundations through subcontracts, thus complicating the identification of funding sources. In addition, institutional policy may determine whether unrestricted state support is reported as state or institutional funding.

**Item 1A** is a request for total and federally financed current fund expenditures for separately budgeted S&E R&D passed through the institution to subrecipients.

**Item 1B** is a request for total and federally financed current fund expenditures for separately budgeted S&E R&D received by the institution as a subrecipient.

**Item 2** is a request for total and federally financed current fund expenditures for separately budgeted R&D activities by detailed S&E fields. When interpreting these data at the detailed discipline level, users should keep in mind that there is considerable interdisciplinary and multidisciplinary activity.

**Item 2A** is a request for total and federally financed current fund expenditures for separately budgeted non-S&E R&D activities by detailed non-S&E fields. This item was originally added to the survey as an optional item in FY 1997 and was collected as a core item for the first time in FY 2003.

Table A-15 shows non-S&E R&D expenditures for the 100 institutions reporting the highest amounts. Table A-16 shows federal non-S&E R&D expenditures for the 100 institutions reporting the highest amounts.

**Item 2B** is a request for federally financed current fund expenditures for separately budgeted R&D activities by S&E field and federal agency. This item was originally added to the survey as an optional item in FY 1998 and was collected as a core item for the first time in FY 2003.

Table A-17 shows federally financed R&D expenditures by S&E field and federal agency for those institutions that responded to this item. Of the 630 universities and colleges surveyed, 516 responded to this question.

**Item 3** is a request for the portions of total and federally financed expenditures reported in items 1 and 2 that were used for the purchase of research equipment out of current funds. This portion includes all research equipment purchased under sponsored research project awards and disbursed in the same detailed disciplines as in item 2. These data are of special interest to federal and institutional policymakers in determining current funding levels for scientific research instrumentation.

## RESPONSE RATE

The FY 2003 survey questionnaires were sent by e-mail in December 2003. Respondents could choose to submit an Adobe Portable Document Format questionnaire from the Web or use the Web-based data collection system to respond to the survey. Every effort was made to maintain close contact with respondents in order to preserve both consistency and continuity in the resulting data. Questionnaires were carefully examined for completeness upon receipt. Computerized facsimiles of the survey data were then prepared for each institution; these compared the current and 2 prior years of data and noted any substantive disparities. Respondents were sent personalized e-mail messages asking them to provide revisions before the final processing and tabulation of data. The e-mail messages included a link to the academic R&D expenditures survey Web-based data collection system, allowing respondents to view and correct their data via the Web.

Respondents were asked to explain significant discrepancies between current and prior years' reporting patterns previously verified as correct. They were encouraged to correct prior years' data if anomalies were identified. When respondents updated or amended figures from past years, NSF made corresponding changes to trend data in this report and to the underlying microdata database. Similarly, if a respondent institution underwent an organizational change, such as a merger, NSF incorporated the effects of the change into prior years' data.

By the survey's closing date, at the beginning of September 2004, forms had been received from 593 universities and colleges out of the academic population of 630, a response rate of 94.1 percent. Responses were received from 96.5 percent of all doctorate-granting institutions, to which 98.5 percent of the estimated national R&D expenditures in S&E fields had been disbursed. All 36

FFRDCs returned forms. Table A-2 displays a detailed breakdown of response rates by highest degree granted.

## NATIONAL TOTAL AND IMPUTATION

Two statistical procedures were used to provide a national estimate for all universities and colleges performing R&D in FY 2003. First, data were estimated by imputation for the 37 institutions that had not responded by the closing date of the survey, using imputation techniques that have been used consistently since FY 1976. Second, data were imputed for universities and colleges that submitted only partial responses. The imputed total was \$159 million, or 0.4 percent of the \$40 billion in all separately budgeted R&D expenditures (table A-3).

Tables A-4 and A-5 present breakdowns of the total and federal imputed amounts by S&E field. The dollar amount imputed is displayed along with the percentage it represents of the national estimate for universities and colleges in a particular field. The amount imputed is similarly broken down by source of funds in table A-6.

A number of surveyed institutions have responded intermittently in past years. For the years in which no response was received, data have been imputed as previously described. Although the imputation algorithm accurately reflects national trends, it cannot account for specific trends at individual institutions. For this reason, a separate estimation of prior-years data was performed, following current-year imputation.

For each institution, formerly imputed key variables for items 1–3 were recomputed to ensure that the imputed data accurately represent the growth patterns shown by reported data. If, for example, data were reported for FY 1996 and FY 2003 but not for the intervening years, the difference between the reported figures for each item total was calculated and evenly distributed across the intervening years (1997–2002). The new figures were spread across disciplines (items 2 and 3) or sources of support (item 1) on the basis of the most recent reporting pattern. Institutions were given an opportunity to review imputed data and provide comments before data were finalized. These procedures result in much more consistent reporting trends for individual institutions but have little effect on aggregate figures reflecting national totals.

## CHANGES IN BASIC RESEARCH TOTALS

The Division of Science Resources Statistics (SRS) at NSF regularly reviews the methodologies used in the academic R&D expenditures survey with the goal of producing the most accurate statistics possible for researchers and policymakers. A review of responses to item 1, question 2, was conducted in FY 2001, 2002, and 2003. The reviews determined that the aggregate statistics could be improved by refining the imputation methodology for the item. Some universities and colleges are either unable or unwilling to respond to this question, and values must be imputed for it to present aggregate statistics.

In the past, if a respondent did not reply to the basic research question, the prior year's basic research share (whether reported by or imputed for the respondent) was carried forward. After interviews with respondents revealed that abnormal or erroneous values (such as 0 percent basic research) were sometimes carried forward for several years, a revised imputation methodology was introduced. The revised imputation methodology carries forward the prior year's basic research share only if the respondent reported or estimated that year's data. In all other cases an econometric model is used to impute the amount of total and federal basic research. The model accounts for differences between public and private institutions and nonfederal sources of R&D funding.

## ITEM 1A ANALYSIS

Item 1A was completed by 90.9 percent of the respondents from academic institutions. The total R&D expenditures passed through to subrecipients, \$2.4 billion, represents 7.2 percent of item 1A respondents' total R&D expenditures and 6.1 percent of all separately budgeted R&D in FY 2003 (table A-7). Doctorate-granting institutions reported a higher percentage of pass-through funds in item 1A than did nondoctorate-granting institutions, 7.2 percent compared with 5.1 percent (\$25 million) for nondoctorate-granting institutions. Item 1A respondents from private institutions reported a higher percentage of pass-through funds (8.5 percent) than did those from public institutions (6.4 percent).

Academic respondents to item 1A reported \$2.1 billion in federal R&D funds passed through to subrecipients (table A-8). This amount represents 9.9 percent of the

federal support reported by item 1A respondents and 8.5 percent of the \$25 billion in federal support to all respondents.

Table A-9 shows the R&D expenditures passed through to subrecipients for the 100 institutions reporting the highest amounts. Table A-10 shows the federal R&D expenditures passed through to subrecipients for the 100 institutions reporting the highest amounts.

## ITEM 1B ANALYSIS

Item 1B was completed by 89.6 percent of the respondents from academic institutions. The total R&D expenditures received as subrecipients, \$2.6 billion, represents 7.9 percent of item 1B respondents' total R&D expenditures and 6.5 percent of all separately budgeted R&D in FY 2003 (table 11). Doctorate-granting institutions reported a lower percentage of funds received as subrecipients in item 1B than did nondoctorate-granting institutions, 7.8 percent (\$2.5 billion) compared with 10.9 percent (\$55 million) for nondoctorate-granting institutions. Item 1B respondents from private institutions reported a slightly higher percentage of funds received as subrecipients (7.9 percent) than did those from public institutions (7.8 percent).

Academic respondents to item 1B reported \$2.3 billion in federal R&D funds received as subrecipients (table 12). This amount represents 11.1 percent of the federal support reported by item 1B respondents and 9.3 percent of the \$25 billion in federal support to all respondents.

Table A-13 shows R&D expenditures received as a subrecipient for the 100 institutions reporting the highest amounts. Table A-14 shows federal R&D expendi-

tures received as a subrecipient for the 100 institutions reporting the highest amounts.

## DATA AVAILABILITY

Data from this survey and previous reports are available on the Web at <http://www.nsf.gov/statistics/>.

Selected data items for institutions are available on the Web at <http://www.nsf.gov/statistics/profiles/start.cfm>. The institutional profiles cover data from this survey and data collected in other NSF academic S&E surveys: the Survey of Graduate Students and Postdoctorates in Science and Engineering (graduate student survey) and the Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions (federal S&E support survey). The profiles are also linked to the corresponding ranking table for each survey.

Data for these and other surveys are available through WebCASPAR, a database system designed to provide quick, convenient access to a wide range of statistical data on U.S. universities and colleges and their science and engineering resources. The latest version of WebCASPAR is available on the Web at <http://webcaspar.nsf.gov/>.

WebCASPAR data are drawn from a number of sources. All data are available for individual institutions, by state, and at the national level. Longitudinal data from surveys of universities and colleges conducted by SRS include the academic R&D expenditures survey, graduate student survey, and federal S&E support survey. Data from the National Center for Education Statistics surveys of universities and colleges include earned degrees, opening fall enrollment, tuition, faculty salaries, tenure and fringe benefits, and financial statistics.

# LIST OF TABLES

<i>Table</i>	<i>Page</i>
A-1. Institutions surveyed for the academic R&D expenditures survey, by respondent type and highest degree granted: FY 1998–2003 .....	237
A-2. Response rates for the academic R&D expenditures survey, by respondent type and highest degree granted: FY 2003 .....	238
A-3. Imputed amounts for total R&D expenditures at universities and colleges, by highest degree granted: FY 2003 .....	239
A-4. Imputed amounts for total R&D expenditures at universities and colleges, by science and engineering field: FY 2003 .....	240
A-5. Imputed amounts for federally financed R&D expenditures at universities and colleges, by science and engineering field: FY 2003 .....	241
A-6. Imputed amounts for R&D expenditures at universities and colleges, by source of funds: FY 2003 .....	242
A-7. Item 1A summary of total academic R&D expenditures: FY 2003 .....	243
A-8. Item 1A summary of federal academic R&D expenditures: FY 2003 .....	244
A-9. R&D expenditures passed through to subrecipients by universities and colleges, ranked by amount passed through for the first 100 institutions: FY 2003 .....	245
A-10. Federal R&D expenditures passed through to subrecipients by universities and colleges, ranked by amount passed through for the first 100 institutions: FY 2003 .....	248
A-11. Item 1B summary of total academic R&D expenditures: FY 2003 .....	251
A-12. Item 1B summary of federal academic R&D expenditures: FY 2003 .....	252
A-13. R&D expenditures received as a subrecipient by universities and colleges, ranked by amount received for the first 100 institutions: FY 2003 .....	253
A-14. Federal R&D expenditures received as a subrecipient by universities and colleges, ranked by amount received for the first 100 institutions: FY 2003 .....	256
A-15. R&D expenditures in non-science and engineering fields at universities and colleges, ranked by total non-S&E expenditures for the first 100 institutions: FY 2003 .....	259
A-16. Federally financed R&D expenditures in non-science and engineering fields at universities and colleges, ranked by total federal non-S&E expenditures for the first 100 institutions: FY 2003 .....	262
A-17. Federally financed R&D expenditures at universities and colleges, by field of science and federal agency: FY 2003 .....	265

TABLE A-1. Institutions surveyed for the academic R&amp;D expenditures survey, by respondent type and highest degree granted: FY 1998–2003

Respondent type and highest degree granted	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
All respondents	572	614	639	644	661	666
Universities and colleges	555	597	623	608	625	630
Doctorate	357	359	362	358	361	369
Master's	118	148	162	158	161	159
Bachelor's	80	90	99	92	103	102
All FFRDCs	17	17	16	36	36	36
University-administered FFRDCs	17	17	16	16	16	16
Industry-administered FFRDCs	0	0	0	4	4	4
Nonprofit-administered FFRDCs	0	0	0	16	16	16

FFRDC = federally funded research and development center.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.

TABLE A-2. Response rates for the academic R&D expenditures survey, by respondent type and highest degree granted: FY 2003

Respondent type and highest degree granted	Number in survey universe	Number of complete responses	Number of partial responses	Total number of responses	Response rate
All respondents	666	541	88	629	94.4
Universities and colleges	630	505	88	593	94.1
Doctorate	369	309	47	356	96.5
Master's	159	117	27	144	90.6
Bachelor's	102	79	14	93	91.2
All FFRDCs	36	36	0	36	100.0
University-administered FFRDCs	16	16	0	16	100.0
Industry-administered FFRDCs	4	4	0	4	100.0
Nonprofit-administered FFRDCs	16	16	0	16	100.0

FFRDC = federally funded research and development center.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.

TABLE A-3. Imputed amounts for total R&D expenditures at universities and colleges, by highest degree granted: FY 2003

(Dollars in millions)

Highest degree granted	All separately budgeted R&D expenditures	Imputed amount	Imputed amount as percent of total
All universities and colleges	40,077	159	0.4
Doctorate-granting institutions	39,477	113	0.3
Non-doctorate-granting institutions	601	46	7.7

NOTE: Because of rounding, detail may not add to total.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.



TABLE A-4. Imputed amounts for total R&D expenditures at universities and colleges, by science and engineering field: FY 2003

(Dollars in millions)

Science and engineering field	All separately budgeted R&D expenditures	Imputed amount	Imputed amount as percent of total
All science and engineering	40,077	159	0.4
Computer sciences	1,304	8	0.6
Environmental sciences	2,188	18	0.8
Atmospheric sciences	396	15	3.8
Earth sciences	724	43	5.9
Oceanography	774	36	4.7
Environmental sciences, nec	294	52	17.7
Life sciences	23,764	160	0.7
Agricultural sciences	2,555	50	2.0
Biological sciences	7,392	63	0.9
Medical sciences	12,787	96	0.8
Life sciences, nec	1,030	17	1.7
Mathematical sciences	429	9	2.1
Physical sciences	3,273	39	1.2
Astronomy	392	1	0.3
Chemistry	1,220	22	1.8
Physics	1,420	21	1.5
Physical sciences, nec	240	9	3.8
Psychology	769	5	0.7
Social sciences	1,661	20	1.2
Economics	314	7	2.2
Political sciences	289	2	0.7
Sociology	372	9	2.4
Social sciences, nec	686	14	2.0
Sciences, nec	691	35	5.1
Engineering	5,999	71	1.2
Aeronautical/astronautical engineering	402	47	11.7
Bioengineering/biomedical engineering	314	17	5.4
Chemical engineering	454	25	5.5
Civil engineering	776	20	2.6
Electrical engineering	1,402	134	9.6
Mechanical engineering	822	100	12.2
Metallurgical/materials engineering	535	3	0.6
Engineering, nec	1,295	150	11.6

nec = not elsewhere classified.

NOTES: The imputation rate at the total level is lower than the imputation rates at the science and engineering field levels because many institutions could provide totals but not the science and engineering field details. Because of rounding, detail may not add to total.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.

TABLE A-5. Imputed amounts for federally financed R&D expenditures at universities and colleges, by science and engineering field: FY 2003

(Dollars in millions)

Science and engineering field	All separately budgeted federal R&D expenditures	Imputed amount	Imputed amount as percent of total
All science and engineering	24,734	85	0.3
Computer sciences	936	4	0.4
Environmental sciences	1,440	8	0.6
Atmospheric sciences	297	12	4.0
Earth sciences	440	33	7.5
Oceanography	536	30	5.6
Environmental sciences, nec	166	40	24.1
Life sciences	14,645	114	0.8
Agricultural sciences	762	37	4.9
Biological sciences	5,017	42	0.8
Medical sciences	8,249	69	0.8
Life sciences, nec	617	11	1.8
Mathematical sciences	295	4	1.4
Physical sciences	2,353	18	0.8
Astronomy	272	1	0.4
Chemistry	816	10	1.2
Physics	1,088	14	1.3
Physical sciences, nec	177	2	1.1
Psychology	553	3	0.5
Social sciences	667	9	1.3
Economics	108	4	3.7
Political sciences	92	0	0.0
Sociology	183	3	1.6
Social sciences, nec	284	6	2.1
Sciences, nec	238	7	2.9
Engineering	3,608	31	0.9
Aeronautical/astronautical engineering	306	42	13.7
Bioengineering/biomedical engineering	190	14	7.4
Chemical engineering	248	16	6.5
Civil engineering	327	14	4.3
Electrical engineering	925	126	13.6
Mechanical engineering	533	89	16.7
Metallurgical/materials engineering	303	3	1.0
Engineering, nec	776	134	17.3

nec = not elsewhere classified.

NOTES: The imputation rate at the total level is lower than the imputation rates at the science and engineering field levels because many institutions could provide totals but not the science and engineering field details. Because of rounding, detail may not add to total.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.

TABLE A-6. Imputed amounts for R&D expenditures at universities and colleges, by source of funds: FY 2003  
(Dollars in millions)

Source of funds	All separately budgeted R&D expenditures	Imputed amount	Imputed amount as percent of total
All sources	40,077	159	0.4
Federal government	24,734	85	0.3
State and local government	2,653	16	0.6
Industry	2,162	21	1.0
Institutional funds	7,683	26	0.3
All other sources	2,845	27	0.9

NOTES: Because of rounding, detail may not add to total. Because some institutions reported total R&D expenditures but not individual sources, the sum of imputed sources is greater than the imputed amount for all sources.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.

TABLE A-7. Item 1A summary of total academic R&D expenditures: FY 2003  
(Dollars in thousands)

Highest degree and control	All respondents' total R&D <sup>a</sup>	Item 1A respondents' total R&D <sup>b</sup>	R&D expenditures passed through to subrecipients		
			Total <sup>c</sup>	Educational subrecipients	Other subrecipients
All academic institutions	39,918,745	33,810,976	2,427,685	1,126,739	761,983
Doctorate	39,363,777	33,309,847	2,402,345	1,111,917	751,465
Nondoctorate	554,968	501,129	25,340	14,822	10,518
Public	27,269,171	21,367,528	1,376,165	680,618	479,053
Private	12,649,574	12,443,448	1,051,520	446,121	282,930

<sup>a</sup> Total is amount prior to imputation for nonrespondents.

<sup>b</sup> Item 1A measures amount of R&D expenditures passed through institution to subrecipients.

<sup>c</sup> Detail may not add to total because of rounding and because some institutions provided only total and federal R&D expenditure data passed through to subrecipients.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.

TABLE A-8. Item 1A summary of federal academic R&amp;D expenditures: FY 2003

(Dollars in thousands)

Highest degree and control	All respondents' federal R&D <sup>a</sup>	Item 1A respondents' federal R&D <sup>b</sup>	Federal R&D expenditures passed through to subrecipients		
			Total <sup>c</sup>	Educational subrecipients	Other subrecipients
All academic institutions	24,649,271	21,169,059	2,103,212	1,012,682	606,196
Doctorate	24,319,488	20,868,565	2,088,314	1,003,382	600,598
Nondoctorate	329,783	300,494	14,898	9,300	5,598
Public	15,241,189	11,911,463	1,186,930	610,442	391,589
Private	9,408,082	9,257,596	916,282	402,240	214,607

<sup>a</sup> Total is amount prior to imputation for nonrespondents.<sup>b</sup> Item 1A measures amount of R&D expenditures passed through institution to subrecipients.<sup>c</sup> Detail may not add to total because of rounding and because some institutions provided only total and federal R&D expenditure data passed through to subrecipients.

SOURCE: National Science Foundation/Division of Sciences Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.

TABLE A-9. R&D expenditures passed through to subrecipients by universities and colleges, ranked by amount passed through for the first 100 institutions: FY 2003  
(Dollars in thousands)

Institutions ranked by amount of R&D expenditures passed through	All R&D expenditures	R&D expenditures passed through to subrecipients		
		Total	Educational subrecipients	Other subrecipients
All institutions	40,077,399	2,427,685	1,126,739	761,983
1 Johns Hopkins U., The <sup>a</sup>	1,244,132	105,815	NA	NA
2 Stanford U.	603,227	74,603	NA	NA
3 Harvard U.	408,707	59,577	20,641	38,936
4 U. PA	564,716	56,782	33,058	23,724
5 Duke U.	520,191	54,103	35,768	18,335
6 U. MI all campuses	780,054	49,167	32,479	16,688
7 Columbia U. in the City of NY	437,669	47,733	26,730	21,003
8 U. Southern CA	414,099	45,716	17,422	28,294
9 U. AZ	454,941	44,034	33,025	11,009
10 U. CO all campuses	436,761	42,542	14,513	28,029
11 U. IL Urbana-Champaign	493,581	40,694	29,000	11,694
12 U. WI Madison	721,248	39,547	27,832	11,715
13 U. MN all campuses	508,557	38,490	NA	NA
14 U. NC Chapel Hill	390,542	38,442	20,216	18,226
15 Baylor C. of Medicine	461,763	37,365	33,051	4,314
16 U. MD College Park	321,899	31,477	0	31,477
17 CA Institute of Technology	240,664	30,712	NA	NA
18 OH State U. all campuses	496,438	30,624	15,621	15,003
19 MA Institute of Technology	485,764	29,979	16,490	13,489
20 U. Pittsburgh all campuses	409,684	28,198	14,381	13,817
21 U. South FL	213,249	26,724	NA	NA
22 Yale U.	387,644	26,218	NA	NA
23 Cornell U. all campuses	554,760	26,159	NA	NA
24 Washington U. St. Louis	474,328	24,381	18,646	5,735
25 Carnegie-Mellon U.	186,351	24,006	14,323	9,683
26 U. FL	429,734	23,816	21,434	2,382
27 U. AL Birmingham, The	284,497	23,508	NA	NA
28 U. Chicago	247,322	21,934	15,938	5,996
29 GA Institute of Technology all campuses	364,190	21,756	NA	NA
30 MS State U.	165,922	21,344	16,176	5,168
31 Boston U.	224,841	21,310	7,684	13,626
32 Rutgers, The State U. NJ all campuses	274,576	20,599	14,564	6,035
33 Northwestern U.	319,722	19,484	NA	NA
34 Emory U.	323,224	18,958	11,734	7,224
35 NC State U.	286,025	18,697	10,545	8,152
36 U. VA all campuses	206,199	18,683	13,753	4,930
37 MI State U.	321,410	18,598	14,658	3,940
38 FL State U.	152,277	18,249	6,925	11,324
39 IN U. all campuses	337,669	18,247	8,336	9,911
40 U. TX Austin	343,854	17,823	6,372	11,451
41 U. HI Manoa	179,285	17,648	5,669	11,979
42 NM State U. all campuses	108,613	17,594	5,642	11,952
43 Vanderbilt U.	276,074	17,541	11,657	5,884
44 U. MS all campuses	85,378	17,536	12,821	4,715
45 U. TX Health Science Ctr. Houston	149,294	16,902	11,394	5,508
46 Case Western Reserve U.	250,674	16,820	16,820	0
47 U. IL Chicago	291,507	16,214	8,328	7,886
48 U. NE central administration	276,424	15,792	8,902	6,890
49 U. IA	292,035	15,772	NA	NA

TABLE A-9. R&D expenditures passed through to subrecipients by universities and colleges, ranked by amount passed through for the first 100 institutions: FY 2003  
(Dollars in thousands)

Institutions ranked by amount of R&D expenditures passed through	All R&D expenditures	R&D expenditures passed through to subrecipients		
		Total	Educational subrecipients	Other subrecipients
50 Purdue U. all campuses	309,476	15,336	11,313	4,023
51 U. GA	299,748	15,283	NA	NA
52 Wake Forest U.	130,405	15,280	NA	NA
53 George Washington U.	92,454	15,116	6,258	8,858
54 Dartmouth C.	155,795	15,067	6,805	8,262
55 Princeton U.	179,951	14,743	9,568	5,175
56 U. TX Southwestern Medical Ctr. Dallas	276,692	14,680	10,307	4,373
57 U. NH	96,415	14,167	NA	NA
58 U. Rochester	285,768	14,139	11,432	2,707
59 OR Health and Science U.	197,178	14,026	5,093	8,933
60 VA Polytechnic Institute and State U.	247,807	13,973	7,691	6,282
61 U. KY all campuses	272,062	13,903	13,903	0
62 NY U.	241,593	13,820	10,782	3,038
63 Eastern VA Medical School	32,801	13,641	3,701	9,940
64 Mt. Sinai School of Medicine	214,514	13,252	13,252	0
65 U. AK Fairbanks all campuses	128,916	13,247	NA	NA
66 Brown U.	125,090	11,812	NA	NA
67 U. UT	223,739	11,756	6,466	5,290
68 U. Miami	177,709	11,629	3,451	8,178
69 MT State U. Bozeman	91,503	11,480	NA	NA
70 U. TN all campuses	217,389	11,091	6,504	4,587
71 U. KS all campuses	173,024	10,914	7,161	3,753
72 SUNY Buffalo all campuses	240,180	10,875	7,356	3,519
73 Wayne State U.	213,717	10,758	6,034	4,724
74 U. TX M. D. Anderson Cancer Ctr.	315,169	10,703	6,467	4,236
75 U. of Medicine and Dentistry NJ	190,763	10,670	10,670	0
76 Drexel U.	69,548	10,645	NA	NA
77 U. CT all campuses	190,341	10,478	6,754	3,724
78 U. Cincinnati all campuses	255,083	10,147	4,562	5,585
79 U. OK all campuses	174,466	9,716	6,201	3,515
80 OR State U.	167,631	9,699	7,696	2,003
81 U. MO-Columbia	205,212	9,673	6,100	3,573
82 U. NM all campuses	158,239	9,559	7,928	1,631
83 U. NV, Las Vegas	42,205	9,503	5,979	3,524
84 U. Dayton	52,943	9,414	583	8,831
85 Rockefeller U.	192,143	9,406	9,406	0
86 WV U.	104,748	8,977	2,266	6,711
87 NJ Institute of Technology	73,664	8,900	NA	NA
88 Tulane U.	117,709	8,674	5,889	2,785
89 Yeshiva U.	177,236	8,647	8,647	0
90 U. TX Health Science Ctr. San Antonio	133,304	8,353	4,738	3,615
91 Thomas Jefferson U.	109,083	8,273	5,883	2,390
92 San Diego State U.	67,053	8,226	3,869	4,357
93 AZ State U. main campus	145,591	8,198	5,556	2,642
94 U. AL, The	34,187	8,058	7,275	783
95 LA State U. all campuses	314,665	7,997	5,438	2,559
96 TX A&M U. all campuses	456,235	7,959	5,599	2,360
97 Hampton U.	18,673	7,861	7,483	378
98 CO State U.	187,054	7,684	NA	NA
99 OK State U. all campuses	103,079	7,573	NA	NA

TABLE A-9. R&D expenditures passed through to subrecipients by universities and colleges, ranked by amount passed through for the first 100 institutions: FY 2003  
(Dollars in thousands)

Institutions ranked by amount of R&D expenditures passed through	All R&D expenditures	R&D expenditures passed through to subrecipients		
		Total	Educational subrecipients	Other subrecipients
100 SUNY Stony Brook all campuses	200,330	7,330	0	7,330
All other sampled institutions	12,795,404	357,461	212,125	131,685

NA = not available.

<sup>a</sup> The Johns Hopkins University includes the Applied Physics Laboratory.

NOTE: Detail may not add to total because of rounding and because some respondents reporting total R&D funds passed through did not break out these funds by type of subrecipient (educational or other).

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.



TABLE A-10. Federal R&D expenditures passed through to subrecipients by universities and colleges, ranked by amount passed through for the first 100 institutions: FY 2003

(Dollars in thousands)

Institutions ranked by amount of federal R&D expenditures passed through	Federal R&D expenditures	Federal R&D expenditures passed through to subrecipients		
		Total	Educational subrecipients	Other subrecipients
All institutions	24,734,033	2,103,212	1,012,682	606,196
1 Johns Hopkins U., The <sup>a</sup>	1,106,971	97,329	NA	NA
2 Stanford U.	483,540	69,424	NA	NA
3 Harvard U.	348,620	48,285	19,527	28,758
4 U. MI all campuses	516,818	43,061	29,295	13,766
5 U. PA	415,631	42,911	24,544	18,367
6 U. Southern CA	300,195	42,058	15,307	26,751
7 U. CO all campuses	377,941	40,696	14,201	26,495
8 Columbia U. in the City of NY	385,529	40,012	22,407	17,605
9 U. WI Madison	396,231	38,388	27,361	11,027
10 U. NC Chapel Hill	280,678	38,008	20,043	17,965
11 U. AZ	259,074	38,006	28,505	9,501
12 U. IL Urbana-Champaign	266,487	37,235	26,057	11,178
13 Baylor C. of Medicine	302,764	36,954	32,932	4,022
14 U. MN all campuses	293,266	34,441	NA	NA
15 Duke U.	306,864	34,392	34,392	0
16 CA Institute of Technology	219,097	29,292	NA	NA
17 U. Pittsburgh all campuses	345,625	27,032	14,057	12,975
18 U. MD College Park	183,206	26,719	0	26,719
19 Cornell U. all campuses	320,868	25,455	NA	NA
20 OH State U. all campuses	198,488	23,428	14,139	9,289
21 Yale U.	296,713	23,428	NA	NA
22 U. AL Birmingham, The	245,217	23,300	NA	NA
23 Carnegie-Mellon U.	157,583	22,727	14,298	8,429
24 U. South FL	106,102	22,680	NA	NA
25 MA Institute of Technology	356,206	22,636	11,879	10,757
26 Washington U. St. Louis	357,364	22,480	17,950	4,530
27 Boston U.	203,947	21,191	7,655	13,536
28 MS State U.	79,837	21,003	15,915	5,088
29 U. Chicago	201,129	20,636	14,864	5,772
30 U. FL	194,958	20,609	18,548	2,061
31 Northwestern U.	200,316	17,988	NA	NA
32 U. HI Manoa	143,580	17,648	5,669	11,979
33 U. VA all campuses	173,442	17,194	12,461	4,733
34 Vanderbilt U.	221,979	17,191	11,307	5,884
35 GA Institute of Technology all campuses	203,582	17,025	NA	NA
36 FL State U.	87,985	16,915	6,643	10,272
37 NM State U. all campuses	75,368	16,883	5,642	11,241
38 Emory U.	228,255	16,853	11,536	5,317
39 U. MS all campuses	62,140	16,770	12,122	4,648
40 Rutgers, The State U. NJ all campuses	106,060	16,625	13,034	3,591
41 Case Western Reserve U.	205,452	15,381	15,381	0
42 U. TX Health Science Ctr. Houston	107,481	15,247	9,993	5,254
43 U. NE central administration	96,627	14,848	8,565	6,283
44 U. TX Southwestern Medical Ctr. Dallas	177,196	14,680	10,307	4,373
45 IN U. all campuses	153,625	14,382	7,042	7,340
46 U. IA	197,260	14,317	NA	NA
47 Dartmouth C.	106,034	14,172	6,502	7,670
48 Wake Forest U.	108,467	14,058	NA	NA
49 NC State U.	96,157	14,055	7,574	6,481

TABLE A-10. Federal R&D expenditures passed through to subrecipients by universities and colleges, ranked by amount passed through for the first 100 institutions: FY 2003

(Dollars in thousands)

Institutions ranked by amount of federal R&D expenditures passed through	Federal R&D expenditures	Federal R&D expenditures passed through to subrecipients		
		Total	Educational subrecipients	Other subrecipients
50 NY U.	166,033	13,753	10,782	2,971
51 U. NH	59,463	13,609	NA	NA
52 U. GA	93,884	13,519	NA	NA
53 Purdue U. all campuses	129,199	12,977	10,729	2,248
54 U. TX Austin	231,996	12,962	5,691	7,271
55 Mt. Sinai School of Medicine	152,719	12,871	12,871	0
56 George Washington U.	68,959	12,774	5,680	7,094
57 U. IL Chicago	168,063	12,748	7,421	5,327
58 OR Health and Science U.	164,221	12,509	4,393	8,116
59 U. AK Fairbanks all campuses	72,607	12,500	NA	NA
60 U. UT	152,112	11,596	6,378	5,218
61 VA Polytechnic Institute and State U.	98,143	11,572	7,099	4,473
62 Princeton U.	104,011	11,237	8,489	2,748
63 MI State U.	133,820	11,197	8,445	2,752
64 U. Rochester	208,148	11,156	9,382	1,774
65 Brown U.	81,445	10,941	NA	NA
66 U. KY all campuses	120,003	10,775	10,775	0
67 U. TX M. D. Anderson Cancer Ctr.	122,869	10,703	6,467	4,236
68 U. of Medicine and Dentistry NJ	105,495	10,670	10,670	0
69 U. KS all campuses	90,876	10,273	6,948	3,325
70 Drexel U.	49,271	10,238	NA	NA
71 SUNY Buffalo all campuses	129,794	10,118	6,844	3,274
72 U. Cincinnati all campuses	185,261	10,085	4,519	5,566
73 U. NV, Las Vegas	32,511	9,503	5,979	3,524
74 U. CT all campuses	111,654	9,482	6,367	3,115
75 U. Dayton	47,327	9,329	574	8,755
76 Rockefeller U.	75,303	9,219	9,219	0
77 U. NM all campuses	106,541	9,191	7,746	1,445
78 MT State U. Bozeman	53,283	9,184	NA	NA
79 U. TN all campuses	100,486	9,136	6,243	2,893
80 Yeshiva U.	128,894	8,647	8,647	0
81 U. MO-Columbia	84,211	8,577	5,293	3,284
82 WV U.	60,586	8,336	2,122	6,214
83 U. TX Health Science Ctr. San Antonio	86,683	8,277	4,682	3,595
84 U. Miami	130,863	8,168	3,037	5,131
85 Wayne State U.	102,963	7,996	4,919	3,077
86 Tulane U.	82,118	7,931	5,592	2,339
87 Hampton U.	18,417	7,861	7,483	378
88 U. OK all campuses	75,318	7,772	5,404	2,368
89 U. AL, The	26,241	7,582	7,013	569
90 AZ State U. main campus	71,741	7,484	5,304	2,180
91 CO State U.	117,151	6,917	NA	NA
92 Thomas Jefferson U.	85,348	6,846	5,878	968
93 SUNY Stony Brook all campuses	112,452	6,757	0	6,757
94 OR State U.	100,499	6,556	4,553	2,003
95 TX A&M U. all campuses	177,119	6,535	5,409	1,126
96 OK State U. all campuses	37,748	6,472	NA	NA
97 Clemson U.	62,552	6,466	NA	NA
98 U. MA Worcester	109,082	6,206	6,206	0
99 Loma Linda U.	22,675	5,969	0	5,969

TABLE A-10. Federal R&D expenditures passed through to subrecipients by universities and colleges, ranked by amount passed through for the first 100 institutions: FY 2003

(Dollars in thousands)

Institutions ranked by amount of federal R&D expenditures passed through	Federal R&D expenditures	Federal R&D expenditures passed through to subrecipients		
		Total	Educational subrecipients	Other subrecipients
100 U. DE	69,493	5,961	3,869	2,092
All other sampled institutions	7,298,427	278,021	179,906	92,364

NA = not available.

<sup>a</sup> The Johns Hopkins University includes the Applied Physics Laboratory.

NOTES: Detail may not add to total because of rounding and because some respondents reporting federal R&D funds passed through did not break out these funds by type of subrecipient (educational or other). Tied institutions are ranked alphabetically.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.

TABLE A-11. Item 1B summary of total academic R&D expenditures: FY 2003  
(Dollars in thousands)

Highest degree and control	All respondents' total R&D <sup>a</sup>	Item 1B respondents' total R&D <sup>b</sup>	R&D expenditures received as a subrecipient		
			Total <sup>c</sup>	Higher education pass-through entities	Other pass-through entities
All academic institutions	39,918,745	32,974,984	2,589,400	1,135,390	1,063,611
Doctorate	39,363,777	32,470,188	2,534,338	1,113,239	1,038,230
Nondoctorate	554,968	504,796	55,062	22,151	25,381
Public	27,269,171	21,157,837	1,656,224	750,544	727,601
Private	12,649,574	11,817,147	933,176	384,846	336,010

<sup>a</sup> Total is amount prior to imputation for nonrespondents.

<sup>b</sup> Item 1B measures amount of R&D expenditures received as a subrecipient.

<sup>c</sup> Detail may not add to total because of rounding and because some institutions provided only total and federal R&D expenditure data received as a subrecipient.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.

TABLE A-12. Item 1B summary of federal academic R&D expenditures: FY 2003  
(Dollars in thousands)

Highest degree and control	All respondents' federal R&D <sup>a</sup>	Item 1B respondents' federal R&D <sup>b</sup>	Federal R&D expenditures received as a subrecipient		
			Total <sup>c</sup>	Higher education pass-through entities	Other pass-through entities
All academic institutions	24,649,271	20,648,443	2,301,947	1,031,076	930,215
Doctorate	24,319,488	20,345,893	2,256,822	1,012,302	911,394
Nondoctorate	329,783	302,550	45,125	18,774	18,821
Public	15,241,189	11,837,903	1,463,613	680,493	630,838
Private	9,408,082	8,810,540	838,334	350,583	299,377

<sup>a</sup> Total is amount prior to imputation for nonrespondents.

<sup>b</sup> Item 1B measures amount of R&D expenditures received as a subrecipient.

<sup>c</sup> Detail may not add to total because of rounding and because some institutions provided only total and federal R&D expenditure data received as a subrecipient.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.

TABLE A-13. R&D expenditures received as a subrecipient by universities and colleges, ranked by amount received for the first 100 institutions: FY 2003

(Dollars in thousands)

Institutions ranked by amount of R&D expenditures received as a subrecipient	All R&D expenditures	R&D expenditures received as a subrecipient		
		Total	Educational pass-through entities	Other pass-through entities
All institutions	40,077,399	2,589,400	1,135,390	1,063,611
1 U. MI all campuses	780,054	83,643	40,873	42,770
2 Stanford U.	603,227	67,251	NA	NA
3 MA Institute of Technology	485,764	65,736	28,224	37,512
4 TX A&M U. all campuses	456,235	64,998	56,732	8,266
5 U. AZ	454,941	58,718	38,238	20,480
6 OH State U. all campuses	496,438	52,679	22,614	30,065
7 Johns Hopkins U., The <sup>a</sup>	1,244,132	51,231	NA	NA
8 U. WI Madison	721,248	46,451	19,671	26,780
9 Harvard U.	408,707	42,966	14,549	28,417
10 U. TX Austin	343,854	42,282	19,010	23,272
11 Columbia U. in the City of NY	437,669	41,105	19,846	21,259
12 U. Southern CA	414,099	40,114	20,202	19,912
13 U. CO all campuses	436,761	39,158	17,817	21,341
14 U. IL Urbana-Champaign	493,581	34,903	15,903	19,000
15 Cornell U. all campuses	554,760	34,552	14,421	20,131
16 U. FL	429,734	33,564	11,073	22,491
17 GA Institute of Technology all campuses	364,190	32,889	NA	NA
18 Northwestern U.	319,722	31,729	NA	NA
19 CA Institute of Technology	240,664	31,561	18,581	12,980
20 Emory U.	323,224	31,503	11,715	19,788
21 Purdue U. all campuses	309,476	31,003	11,730	19,273
22 U. MN all campuses	508,557	29,692	NA	NA
23 Carnegie-Mellon U.	186,351	28,906	14,147	14,759
24 U. AL Birmingham, The	284,497	28,327	17,322	11,005
25 U. MD College Park	321,899	27,920	7,348	20,572
26 U. Pittsburgh all campuses	409,684	26,654	NA	NA
27 Washington U. St. Louis	474,328	26,041	12,519	13,522
28 Duke U.	520,191	24,740	18,478	6,262
29 AZ State U. main campus	145,591	24,705	6,249	18,456
30 U. NC Chapel Hill	390,542	23,694	14,530	9,164
31 U. Rochester	285,768	23,587	NA	NA
32 Rutgers, The State U. NJ all campuses	274,576	23,380	13,265	10,115
33 Yale U.	387,644	22,774	NA	NA
34 Boston U.	224,841	21,633	11,691	9,942
35 Vanderbilt U.	276,074	21,227	10,163	11,064
36 U. OK all campuses	174,466	20,321	6,519	13,802
37 PA State U. all campuses	533,427	19,945	19,945	0
38 U. Chicago	247,322	19,304	12,526	6,778
39 U. UT	223,739	19,281	8,403	10,878
40 U. SC all campuses	121,410	17,457	17,457	0
41 IN U. all campuses	337,669	16,919	9,678	7,241
42 VA Polytechnic Institute and State U.	247,807	16,874	6,165	10,709
43 Tulane U.	117,709	16,839	3,186	13,653
44 NC State U.	286,025	16,663	11,791	4,872
45 MI State U.	321,410	16,616	8,141	8,475
46 U. NM all campuses	158,239	16,580	6,486	10,094
47 U. AK Fairbanks all campuses	128,916	16,448	NA	NA
48 U. HI Manoa	179,285	16,239	4,516	11,723
49 U. KY all campuses	272,062	15,891	5,642	10,249

TABLE A-13. R&D expenditures received as a subrecipient by universities and colleges, ranked by amount received for the first 100 institutions: FY 2003

(Dollars in thousands)

Institutions ranked by amount of R&D expenditures received as a subrecipient	All R&D expenditures	R&D expenditures received as a subrecipient		
		Total	Educational pass-through entities	Other pass-through entities
50 U. IL Chicago	291,507	15,778	7,182	8,596
51 Case Western Reserve U.	250,674	15,065	15,065	0
52 LA State U. all campuses	314,665	14,981	9,533	5,448
53 FL State U.	152,277	14,684	3,428	11,256
54 Auburn U. all campuses	124,103	14,415	5,205	9,210
55 U. Central FL	89,880	14,376	NA	NA
56 U. IA	292,035	14,025	NA	NA
57 U. NV, Reno	80,553	13,962	10,648	3,314
58 OR State U.	167,631	13,796	7,800	5,996
59 MT State U. Bozeman	91,503	13,726	NA	NA
60 U. CT all campuses	190,341	13,623	5,875	7,748
61 U. NE central administration	276,424	13,603	7,518	6,085
62 U. TX Health Science Ctr. Houston	149,294	13,403	9,819	3,584
63 WV U.	104,748	13,305	5,217	8,088
64 MS State U.	165,922	13,300	6,285	7,015
65 CO State U.	187,054	13,143	7,674	5,469
66 Princeton U.	179,951	13,102	9,601	3,501
67 Baylor C. of Medicine	461,763	12,892	8,720	4,172
68 Mt. Sinai School of Medicine	214,514	12,308	9,848	2,460
69 Medical U. SC	150,551	12,252	4,402	7,850
70 U. KS all campuses	173,024	12,179	4,821	7,358
71 OK State U. all campuses	103,079	11,898	NA	NA
72 Catholic U. America, The	24,475	11,883	361	11,522
73 NY U.	241,593	11,481	6,289	5,192
74 U. TX M. D. Anderson Cancer Ctr.	315,169	11,460	9,447	2,013
75 U. NH	96,415	11,283	3,745	7,538
76 SUNY Albany	120,655	11,027	6,423	4,604
77 U. Cincinnati all campuses	255,083	10,769	3,930	6,839
78 Dartmouth C.	155,795	10,665	6,161	4,504
79 Rice U.	52,367	10,556	8,844	1,712
80 Thomas Jefferson U.	109,083	10,401	8,368	2,033
81 KS State U.	112,733	10,145	5,747	4,398
82 OR Health and Science U.	197,178	10,144	5,179	4,965
83 U. MO-Columbia	205,212	10,082	4,368	5,714
84 U. Southern MS	35,049	9,691	6,620	3,071
85 Woods Hole Oceanographic Institution	104,223	9,622	9,622	0
86 Brown U.	125,090	9,421	3,760	5,661
87 U. DE	100,706	9,246	4,225	5,021
88 WA State U.	175,181	9,228	3,526	5,702
89 SUNY Stony Brook all campuses	200,330	9,092	5,274	3,818
90 U. MA Worcester	148,823	9,076	3,102	5,974
91 U. TN all campuses	217,389	8,966	4,150	4,816
92 U. TX Health Science Ctr. San Antonio	133,304	8,795	3,396	5,399
93 Clark Atlanta U.	12,760	8,667	1,130	7,537
94 NM Institute of Mining and Technology	37,186	8,318	2,266	6,052
95 Rush U.	89,196	8,261	7,025	1,236
96 NM State U. all campuses	108,613	8,236	2,687	5,549
97 George Washington U.	92,454	7,968	4,542	3,426
98 Tufts U.	112,609	7,943	3,934	4,009
99 U. GA	299,748	7,805	NA	NA

TABLE A-13. R&D expenditures received as a subrecipient by universities and colleges, ranked by amount received for the first 100 institutions: FY 2003

(Dollars in thousands)

Institutions ranked by amount of R&D expenditures received as a subrecipient	All R&D expenditures	R&D expenditures received as a subrecipient		
		Total	Educational pass-through entities	Other pass-through entities
100 Temple U.	71,327	7,698	5,282	2,416
All other sampled institutions	13,557,651	454,962	229,980	198,668

NA = not available.

<sup>a</sup> The Johns Hopkins University includes the Applied Physics Laboratory.

NOTE: Detail may not add to total because of rounding and because some respondents reporting total R&D funds received as a subrecipient did not break out these funds by type of pass-through entity (educational or other).

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.



TABLE A-14. Federal R&D expenditures received as a subrecipient by universities and colleges, ranked by amount received for the first 100 institutions: FY 2003

(Dollars in thousands)

Institutions ranked by amount of federal R&D expenditures received as a subrecipient	Federal R&D expenditures	Federal R&D expenditures received as a subrecipient		
		Total	Educational pass-through entities	Other pass-through entities
All institutions	24,734,033	2,301,947	1,031,076	930,215
1 U. MI all campuses	516,818	74,523	34,953	39,570
2 TX A&M U. all campuses	177,119	63,653	55,650	8,003
3 MA Institute of Technology	356,206	59,527	27,644	31,883
4 U. AZ	259,074	58,718	38,238	20,480
5 Stanford U.	483,540	55,458	NA	NA
6 Johns Hopkins U., The <sup>a</sup>	1,106,971	51,231	NA	NA
7 U. WI Madison	396,231	46,451	19,671	26,780
8 U. TX Austin	231,996	42,282	19,010	23,272
9 Harvard U.	348,620	40,968	13,334	27,634
10 Columbia U. in the City of NY	385,529	39,676	19,223	20,453
11 U. CO all campuses	377,941	39,158	17,817	21,341
12 Cornell U. all campuses	320,868	33,190	13,059	20,131
13 GA Institute of Technology all campuses	203,582	32,889	NA	NA
14 U. Southern CA	300,195	32,002	17,545	14,457
15 CA Institute of Technology	219,097	31,561	18,581	12,980
16 U. IL Urbana-Champaign	266,487	31,520	13,952	17,568
17 U. FL	194,958	28,512	10,797	17,715
18 U. AL Birmingham, The	245,217	28,327	17,322	11,005
19 Carnegie-Mellon U.	157,583	28,197	13,949	14,248
20 U. MN all campuses	293,266	26,552	NA	NA
21 U. Pittsburgh all campuses	345,625	26,198	NA	NA
22 Northwestern U.	200,316	25,966	NA	NA
23 Washington U. St. Louis	357,364	25,628	12,439	13,189
24 Emory U.	228,255	24,813	10,992	13,821
25 AZ State U. main campus	71,741	23,903	5,817	18,086
26 Yale U.	296,713	22,774	NA	NA
27 U. MD College Park	183,206	22,068	5,353	16,715
28 Boston U.	203,947	21,633	11,691	9,942
29 Vanderbilt U.	221,979	21,227	10,163	11,064
30 Rutgers, The State U. NJ all campuses	106,060	21,155	12,280	8,875
31 U. Rochester	208,148	21,126	NA	NA
32 U. NC Chapel Hill	280,678	20,995	12,912	8,083
33 U. OK all campuses	75,318	20,321	6,519	13,802
34 Purdue U. all campuses	129,199	19,192	11,730	7,462
35 U. Chicago	201,129	19,060	12,282	6,778
36 U. UT	152,112	18,614	8,112	10,502
37 U. SC all campuses	63,044	17,457	17,457	0
38 VA Polytechnic Institute and State U.	98,143	16,874	6,165	10,709
39 NC State U.	96,157	16,663	11,791	4,872
40 U. NM all campuses	106,541	16,580	6,486	10,094
41 U. HI Manoa	143,580	16,239	4,516	11,723
42 U. KY all campuses	120,003	15,891	5,642	10,249
43 MI State U.	133,820	15,869	7,851	8,018
44 IN U. all campuses	153,625	15,784	8,543	7,241
45 Tulane U.	82,118	15,489	3,169	12,320
46 Case Western Reserve U.	205,452	15,065	15,065	0
47 PA State U. all campuses	301,094	14,876	14,876	0
48 FL State U.	87,985	14,684	3,428	11,256
49 Auburn U. all campuses	45,374	14,415	5,205	9,210

TABLE A-14. Federal R&D expenditures received as a subrecipient by universities and colleges, ranked by amount received for the first 100 institutions: FY 2003

(Dollars in thousands)

Institutions ranked by amount of federal R&D expenditures received as a subrecipient	Federal R&D expenditures	Federal R&D expenditures received as a subrecipient		
		Total	Educational pass-through entities	Other pass-through entities
50 U. Central FL	47,749	14,376	NA	NA
51 U. NV, Reno	47,756	13,962	10,648	3,314
52 U. CT all campuses	111,654	13,623	5,875	7,748
53 U. TX Health Science Ctr. Houston	107,481	13,403	9,819	3,584
54 WV U.	60,586	13,305	5,217	8,088
55 U. NE central administration	96,627	13,218	7,217	6,001
56 CO State U.	117,151	13,143	7,674	5,469
57 OR State U.	100,499	13,036	7,282	5,754
58 MS State U.	79,837	12,893	5,878	7,015
59 Baylor C. of Medicine	302,764	12,892	8,720	4,172
60 U. IA	197,260	12,416	NA	NA
61 Mt. Sinai School of Medicine	152,719	12,308	9,848	2,460
62 U. IL Chicago	168,063	12,294	7,079	5,215
63 Medical U. SC	92,893	12,252	4,402	7,850
64 U. KS all campuses	90,876	12,172	4,821	7,351
65 Princeton U.	104,011	11,960	8,459	3,501
66 OK State U. all campuses	37,748	11,895	NA	NA
67 Catholic U. America, The	18,864	11,883	361	11,522
68 U. TX M. D. Anderson Cancer Ctr.	122,869	11,460	9,447	2,013
69 U. NH	59,463	11,283	3,745	7,538
70 MT State U. Bozeman	53,283	10,980	NA	NA
71 Dartmouth C.	106,034	10,665	6,161	4,504
72 Thomas Jefferson U.	85,348	10,401	8,368	2,033
73 U. Cincinnati all campuses	185,261	10,165	3,719	6,446
74 KS State U.	53,313	10,145	5,747	4,398
75 U. MO-Columbia	84,211	10,082	4,368	5,714
76 NY U.	166,033	9,930	6,289	3,641
77 Rice U.	43,706	9,748	8,844	904
78 OR Health and Science U.	164,221	9,645	4,979	4,666
79 Woods Hole Oceanographic Institution	84,410	9,622	9,622	0
80 U. Southern MS	31,653	9,457	6,405	3,052
81 Brown U.	81,445	9,421	3,760	5,661
82 U. DE	69,493	9,246	4,225	5,021
83 WA State U.	70,653	9,228	3,526	5,702
84 SUNY Stony Brook all campuses	112,452	9,092	5,274	3,818
85 U. MA Worcester	109,082	9,076	3,102	5,974
86 U. TX Health Science Ctr. San Antonio	86,683	8,795	3,396	5,399
87 Clark Atlanta U.	12,367	8,667	1,130	7,537
88 NM Institute of Mining and Technology	15,434	8,318	2,266	6,052
89 Rush U.	49,834	8,261	7,025	1,236
90 NM State U. all campuses	75,368	8,236	2,687	5,549
91 U. GA	93,884	7,805	NA	NA
92 Wayne State U.	102,963	7,678	3,581	4,097
93 Rensselaer Polytechnic Institute	32,295	7,597	4,551	3,046
94 U. West FL	9,105	7,273	NA	NA
95 U. Miami	130,863	6,875	3,837	3,038
96 U. MS all campuses	62,140	6,799	5,093	1,706
97 U. MT, The	27,220	6,711	4,559	2,152
98 GA State U.	22,218	6,702	4,918	1,784
99 U. ID	42,861	6,578	2,416	4,162

TABLE A-14. Federal R&D expenditures received as a subrecipient by universities and colleges, ranked by amount received for the first 100 institutions: FY 2003

(Dollars in thousands)

Institutions ranked by amount of federal R&D expenditures received as a subrecipient	Federal R&D expenditures	Federal R&D expenditures received as a subrecipient		
		Total	Educational pass-through entities	Other pass-through entities
100 George Washington U.	68,959	6,566	3,717	2,849
All other sampled institutions	8,544,347	373,455	199,790	159,948

NA = not available.

<sup>a</sup> The Johns Hopkins University includes the Applied Physics Laboratory.

NOTES: Detail may not add to total because of rounding and because some respondents reporting federal R&D funds received as a subrecipient did not break out these funds by type of pass-through entity (educational or other).

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.

TABLE A-15. R&D expenditures in non-science and engineering fields at universities and colleges, ranked by total non-S&E expenditures for the first 100 institutions: FY 2003  
(Dollars in thousands)

Institution and ranking	All S&E R&D expenditures	Non-S&E fields								
		Total	Education	Law	Humanities	Visual and performing arts	Business and management	Communications, journalism, and library science	Social work	Other non-S&E fields
All institutions	40,077,399	1,371,444	597,273	41,313	135,385	39,148	165,061	55,397	55,475	240,650
1 U. WI Madison	721,248	56,022	25,973	2,165	15,194	439	7,869	2,519	593	1,270
2 OH State U. all campuses	496,438	52,767	32,989	42	9,941	4,682	1,849	1,355	0	1,909
3 OR State U.	167,631	40,494	232	0	44	0	0	0	0	40,218
4 Purdue U. all campuses	309,476	37,607	4,993	0	1,586	91	13,298	188	0	17,451
5 FL State U.	152,277	37,402	28,354	1,105	695	1,086	1,485	511	4,166	0
6 Harvard U.	408,707	33,277	11,068	1,999	922	100	49	1	0	19,138
7 U. TX Austin	343,854	32,549	7,547	120	196	339	1,502	6,121	2,992	13,732
8 Southern IL U. Edwardsville	17,100	29,365	18,233	0	54	68	437	163	235	10,175
9 U. IL Urbana-Champaign	493,581	25,632	11,843	246	2,078	777	1,298	2,274	6,288	828
10 U. Southern CA	414,099	25,207	4,682	1,482	4,085	4,496	1,034	5,594	3,834	0
11 Northwestern U.	319,722	22,456	5,111	1,594	1,171	596	13,491	493	0	0
12 U. MD College Park	321,899	22,447	13,664	0	6,350	0	1,349	1,084	0	0
13 MI State U.	321,410	22,071	10,377	0	2,462	216	1,957	1,700	173	5,186
14 U. GA	299,748	21,672	13,270	1,320	2,309	3,833	60	880	0	0
15 U. PA	564,716	19,760	16,235	598	241	0	1,995	667	24	0
16 MA Institute of Technology	485,764	19,605	5,168	0	759	68	12,835	351	0	424
17 FL International U.	52,175	17,810	5,309	85	1,351	723	1,110	1,206	0	8,026
18 U. NE central administration	276,424	17,568	5,198	2,056	6,720	162	3,014	297	0	121
19 George Washington U.	92,454	16,821	14,869	908	800	0	1	243	0	0
20 TX A&M U. all campuses	456,235	15,962	8,961	2,250	1,072	0	3,364	315	0	0
21 CO State U.	187,054	15,387	0	0	0	0	0	0	0	15,387
22 FL A&M U.	23,503	15,152	13,981	0	0	0	0	0	0	1,171
23 Stanford U.	603,227	15,143	11,609	432	216	4	2,345	537	0	0
24 San Jose State U.	28,323	14,624	4,282	0	905	388	1,445	1,476	1,362	4,766
25 Rutgers, The State U. NJ all campuses	274,576	14,499	7,106	299	551	23	2,874	2,091	397	1,158
26 VA Commonwealth U.	126,451	12,971	5,696	0	1	0	389	12	619	6,254
27 Wichita State U.	22,401	12,925	5,696	615	16	25	924	258	5,391	0
28 Western MI U.	21,571	12,764	11,105	2	218	140	635	301	363	0
29 U. NC Greensboro	3,454	12,720	11,523	0	1,044	4	75	14	0	60
30 CA State U. Northridge	11,638	12,362	9,292	0	218	0	1,045	82	0	1,725
31 U. KY all campuses	272,062	12,264	283	613	323	1,486	2,009	3,799	120	3,631
32 PA State U. all campuses	533,427	11,604	2,425	402	974	667	6,621	515	0	0
33 U. KS all campuses	173,024	11,263	9,545	0	696	55	838	9	120	0
34 U. Memphis, The	38,728	11,131	NA	NA	NA	NA	NA	NA	NA	NA
35 CA State U. Dominguez Hills	4,503	10,974	10,331	0	493	0	150	0	0	0

TABLE A-15. R&D expenditures in non-science and engineering fields at universities and colleges, ranked by total non-S&E expenditures for the first 100 institutions: FY 2003  
(Dollars in thousands)

Institution and ranking	All S&E R&D expenditures	Non-S&E fields								
		Total	Education	Law	Humanities	Visual and performing arts	Business and management	Communications, journalism, and library science	Social work	Other non-S&E fields
36 U. Central FL	89,880	10,897	8,381	4	26	53	111	0	0	2,322
37 U. CO all campuses	436,761	10,707	6,123	7	17	1,278	2,680	602	0	0
38 San Diego State U.	67,053	10,294	2,859	0	2,107	340	2,903	549	1,330	206
39 AZ State U. main campus	145,591	10,234	3,305	0	2,050	1,964	2,059	74	0	782
40 George Mason U.	44,980	10,182	2,848	3,601	1,427	112	2,014	0	50	130
41 U. FL	429,734	10,174	3,219	145	531	226	101	2,659	0	3,293
42 SUNY Binghamton	23,090	10,071	0	0	0	0	0	0	0	10,071
43 U. West FL	15,354	10,010	NA	NA	NA	NA	NA	NA	NA	NA
44 Western IL U.	1,350	9,986	9,406	0	0	0	569	11	0	0
45 FL Atlantic U.	25,946	9,958	6,199	0	216	463	1,487	16	0	1,577
46 SUNY Buffalo all campuses	240,180	9,787	4,327	276	553	0	1,755	173	657	2,046
47 U. WI Milwaukee	27,259	9,719	1,622	0	1,499	2	4,723	366	792	715
48 CUNY Brooklyn C.	5,575	9,673	7,788	0	740	5	844	279	0	17
49 GA State U.	45,653	9,195	2,022	718	637	307	1,668	35	961	2,847
50 IN U. all campuses	337,669	9,107	2,832	132	107	697	2,316	798	336	1,889
51 U. AR main campus	82,277	8,713	5,388	574	786	46	360	20	279	1,260
52 U. Cincinnati all campuses	255,083	8,249	1,889	0	2,223	2,862	1,015	96	164	0
53 Princeton U.	179,951	7,784	614	0	6,436	230	0	5	0	499
54 MS State U.	165,922	7,430	4,757	0	880	147	648	104	0	894
55 C. of William and Mary all campuses	43,974	7,393	6,241	93	767	23	261	8	0	0
56 U. NH	96,415	7,273	4,927	0	311	0	1,470	0	279	286
57 U. OR	44,604	7,168	6,657	149	362	0	0	0	0	0
58 Emory U.	323,224	7,090	548	1,626	1,714	15	3,014	173	0	0
59 U. MO-Columbia	205,212	6,944	1,671	52	477	450	241	1,640	216	2,197
60 U. MN all campuses	508,557	6,854	2,540	1,382	1,545	224	72	78	458	555
61 U. SC all campuses	121,410	6,608	2,440	284	905	66	507	129	2,277	0
62 Clemson U.	152,986	6,518	5,052	0	343	75	156	0	0	892
63 Fayetteville State U.	586	6,420	4,962	0	0	26	0	0	0	1,432
64 U. IA	292,035	6,177	1,299	2,513	645	184	627	150	0	759
65 Wayne State U.	213,717	6,104	1,143	101	637	52	345	3	0	3,823
66 U. of Notre Dame	59,803	5,855	4	71	1,892	74	1,620	0	0	2,194
67 U. MS all campuses	85,378	5,770	NA	NA	NA	NA	NA	NA	NA	NA
68 Naval Postgraduate School	61,025	5,745	0	0	0	0	5,745	0	0	0
69 Southwest MO State U.	1,423	5,661	3,263	0	5	345	304	30	277	1,437
70 Case Western Reserve U.	250,674	5,596	0	0	269	268	76	174	4,460	349

TABLE A-15. R&D expenditures in non-science and engineering fields at universities and colleges, ranked by total non-S&E expenditures for the first 100 institutions: FY 2003  
(Dollars in thousands)

Institution and ranking	All S&E R&D expenditures	Non-S&E fields								
		Total	Education	Law	Humanities	Visual and performing arts	Business and management	Communications, journalism, and library science	Social work	Other non-S&E fields
71 U. OK all campuses	174,466	5,448	4,194	0	833	32	175	30	0	184
72 CA State U. San Bernardino	7,576	5,408	4,454	328	21	3	521	0	81	0
73 U. North TX	13,990	5,405	2,253	0	228	124	1,621	1,179	0	0
74 U. Louisville	88,522	5,402	1,061	314	79	110	1,958	89	834	957
75 IA State U.	199,566	5,350	2,096	0	248	19	1,329	24	0	1,634
76 U. LA Lafayette	43,769	5,318	2,035	0	1,423	556	1,116	184	0	4
77 U. TX El Paso	27,185	5,245	3,459	0	386	3	32	552	8	805
78 MT State U. Bozeman	91,503	5,027	480	0	167	214	0	1,238	0	2,928
79 Gallaudet U.	2,013	4,907	4,907	0	0	0	0	0	0	0
80 Western WA U.	4,716	4,828	NA	NA	NA	NA	NA	NA	NA	NA
81 LA State U. all campuses	314,665	4,769	555	863	2,047	84	571	131	96	422
82 WV U.	104,748	4,726	88	846	1,675	9	1,017	191	64	836
83 Vanderbilt U.	276,074	4,612	3,683	67	125	3	0	116	0	618
84 U. HI Hilo	5,317	4,577	3,336	0	0	0	900	0	0	341
85 Wellesley C.	5,733	4,547	0	0	0	60	922	0	0	3,565
86 U. VA all campuses	206,199	4,453	2,860	0	1,273	5	24	189	0	102
87 SUNY Albany	120,655	4,346	4,104	0	159	0	82	1	0	0
88 Benedict C.	1,071	4,295	1,860	0	0	0	0	0	0	2,435
89 GA Southern U.	2,488	4,260	2,813	0	42	0	663	0	557	185
90 U. IL Chicago	291,507	4,258	3,184	0	571	118	315	70	0	0
91 Fairfield U.	1,024	4,219	9	0	0	291	1,950	0	0	1,969
92 U. NC Chapel Hill	390,542	3,844	1,200	16	267	76	851	1,434	0	0
93 U. Denver	9,949	3,829	271	3,113	0	0	35	0	410	0
94 Old Dominion U.	30,324	3,828	3,103	0	10	1	493	2	0	219
95 Teachers C. Columbia U.	9,603	3,815	3,815	0	0	0	0	0	0	0
96 Central WA U.	2,698	3,788	1,090	0	76	0	0	0	0	2,622
97 U. Chicago	247,322	3,768	0	0	491	0	905	0	1,127	1,245
98 Tufts U.	112,609	3,754	603	369	2,401	37	0	291	53	0
99 U. MO-St. Louis	12,819	3,615	501	0	241	40	189	21	100	2,523
100 U. MO-Kansas City	31,104	3,532	80	68	309	263	949	82	286	1,495
All other sampled institutions	23,128,411	188,648	77,903	5,268	28,521	6,098	21,405	6,345	12,646	20,459

NA = not available.

S&E = science and engineering.

NOTE: Detail may not add to total because some respondents reporting total non-S&E R&D expenditures did not break out these funds by non-S&E field.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.

TABLE A-16. Federally financed R&D expenditures in non-science and engineering fields at universities and colleges, ranked by total federal non-S&E expenditures for the first 100 institutions: FY 2003

(Dollars in thousands)

Institution and ranking	Federal S&E R&D expenditures	Non-S&E fields								
		Total	Education	Law	Humanities	Visual and performing arts	Business and management	Communications, journalism, and library science	Social work	Other non- S&E fields
All institutions	24,734,033	544,309	310,936	11,703	31,114	4,137	33,306	17,114	18,145	96,743
1 Southern IL U. Edwardsville	1,340	22,776	15,311	0	0	30	208	77	2	7,148
2 U. WI Madison	396,231	20,266	16,420	193	1,874	1	1,038	227	217	296
3 Harvard U.	348,620	15,893	6,814	19	377	0	0	0	0	8,683
4 FL State U.	87,985	14,950	13,198	339	94	6	97	152	1,064	0
5 OR State U.	100,499	14,879	231	0	44	0	0	0	0	14,604
6 OH State U. all campuses	198,488	14,334	13,097	0	695	53	163	4	0	322
7 FL International U.	40,860	13,942	4,157	64	1,058	566	869	944	0	6,284
8 FL A&M U.	18,273	12,702	11,827	0	0	0	0	0	0	875
9 U. NC Greensboro	2,704	11,999	11,204	0	717	4	74	0	0	0
10 George Washington U.	68,959	10,802	10,208	125	469	0	0	0	0	0
11 VA Commonwealth U.	81,201	10,211	5,084	0	0	0	371	4	43	4,709
12 U. MD College Park	183,206	9,636	6,360	0	1,907	0	1,070	299	0	0
13 CO State U.	117,151	8,724	0	0	0	0	0	0	0	8,724
14 U. TX Austin	231,996	8,542	2,432	102	0	9	217	524	896	4,362
15 MI State U.	133,820	8,053	4,794	0	1,362	0	641	523	102	631
16 U. PA	415,631	8,013	6,729	162	168	0	338	616	0	0
17 Western MI U.	12,131	7,986	7,177	2	171	52	271	39	274	0
18 U. CO all campuses	377,941	7,644	5,443	0	0	0	2,140	61	0	0
19 U. Southern CA	300,195	7,496	1,933	75	1,038	388	775	475	2,812	0
20 U. West FL	9,105	7,480	NA	NA	NA	NA	NA	NA	NA	NA
21 Purdue U. all campuses	129,199	7,176	2,094	0	193	0	1,145	5	0	3,739
22 San Jose State U.	18,935	7,117	3,552	0	50	50	795	1,009	0	1,661
23 CA State U. Northridge	6,460	7,090	5,315	0	218	0	61	82	0	1,414
24 U. IL Urbana-Champaign	266,487	6,692	5,183	61	30	0	120	576	562	160
25 U. GA	93,884	6,229	5,580	0	0	425	0	224	0	0
26 U. KS all campuses	90,876	6,030	5,632	0	151	55	185	0	7	0
27 U. OR	36,127	5,847	5,650	62	135	0	0	0	0	0
28 TX A&M U. all campuses	177,119	5,784	5,366	73	302	0	0	43	0	0
29 Wichita State U.	10,619	5,727	3,183	426	0	0	491	169	1,458	0
30 MA Institute of Technology	356,206	5,637	3,173	0	184	50	1,823	25	0	382
31 SUNY Binghamton	8,981	5,277	0	0	0	0	0	0	0	5,277
32 Western IL U.	379	5,199	4,982	0	0	0	217	0	0	0
33 George Mason U.	38,510	4,892	1,992	2,468	227	23	182	0	0	0
34 U. KY all campuses	120,003	4,855	24	0	206	0	56	3,616	75	878
35 FL Atlantic U.	17,517	4,778	3,456	0	2	0	1,124	2	0	194

TABLE A-16. Federally financed R&D expenditures in non-science and engineering fields at universities and colleges, ranked by total federal non-S&E expenditures for the first 100 institutions: FY 2003

(Dollars in thousands)

Institution and ranking	Federal S&E R&D expenditures	Non-S&E fields								
		Total	Education	Law	Humanities	Visual and performing arts	Business and management	Communications, journalism, and library science	Social work	Other non- S&E fields
36 U. MS all campuses	62,140	4,673	NA	NA	NA	NA	NA	NA	NA	NA
37 Stanford U.	483,540	4,570	3,925	0	157	0	488	0	0	0
38 MT State U. Bozeman	53,283	4,424	400	0	139	178	0	1,032	0	2,675
39 U. VA all campuses	173,442	4,344	2,853	0	1,182	0	24	183	0	102
40 U. FL	194,958	4,198	2,427	35	213	0	0	155	0	1,368
41 CA State U. San Bernardino	4,858	4,160	4,160	0	0	0	0	0	0	0
42 C. of William and Mary all campuses	21,992	3,916	3,326	0	554	0	28	8	0	0
43 SUNY Buffalo all campuses	129,794	3,785	2,648	0	74	0	50	87	93	833
44 U. Chicago	201,129	3,746	0	0	490	0	897	0	1,121	1,238
45 U. Denver	8,268	3,569	193	3,112	0	0	35	0	229	0
46 Western WA U.	2,271	3,502	NA	NA	NA	NA	NA	NA	NA	NA
47 Benedict C.	1,002	3,448	1,350	0	0	0	0	0	0	2,098
48 Northwestern U.	200,316	3,441	3,114	1	31	40	255	0	0	0
49 U. TX El Paso	18,116	3,370	3,365	0	5	0	0	0	0	0
50 U. NE central administration	96,627	3,350	2,598	0	123	0	628	0	0	1
51 Central WA U.	2,246	3,244	636	0	38	0	0	0	0	2,570
52 GA Southern U.	2,074	3,130	2,181	0	42	0	250	0	502	155
53 U. HI Hilo	5,082	3,055	3,051	0	0	0	4	0	0	0
54 IA State U.	82,297	3,027	1,190	0	91	0	621	21	0	1,104
55 U. IA	197,260	3,016	719	1,657	100	0	158	0	0	382
56 SUNY Albany	76,038	2,995	2,928	0	67	0	0	0	0	0
57 Rutgers, The State U. NJ all campuses	106,060	2,980	669	0	192	0	852	1,267	0	0
58 Southwest MO State U.	371	2,946	2,380	0	0	0	283	20	35	228
59 PA State U. all campuses	301,094	2,878	333	0	513	122	1,653	257	0	0
60 GA State U.	22,218	2,830	490	0	10	0	224	0	545	1,561
61 Vanderbilt U.	221,979	2,733	2,600	0	17	0	0	116	0	0
62 U. NH	59,463	2,728	1,559	0	195	0	719	0	0	255
63 CA State U. Dominguez Hills	3,471	2,661	2,183	0	478	0	0	0	0	0
64 U. Houston	32,556	2,645	NA	NA	NA	NA	NA	NA	NA	NA
65 U. MO-Columbia	84,211	2,586	893	4	189	0	0	570	82	848
66 San Diego State U.	28,084	2,460	757	0	503	0	850	0	330	20
67 AZ State U. main campus	71,741	2,397	1,526	0	117	40	72	0	0	642
68 Kent State U. all campuses	9,278	2,336	1,211	63	422	0	0	0	0	640
69 MS State U.	79,837	2,321	2,048	0	13	0	0	0	0	260
70 U. WI Milwaukee	13,704	2,318	1,038	0	137	0	892	0	231	20
71 U. North TX	6,320	2,107	1,856	0	75	3	85	88	0	0



TABLE A-16. Federally financed R&D expenditures in non-science and engineering fields at universities and colleges, ranked by total federal non-S&E expenditures for the first 100 institutions: FY 2003

(Dollars in thousands)

Institution and ranking	Federal S&E R&D expenditures	Non-S&E fields								
		Total	Education	Law	Humanities	Visual and performing arts	Business and management	Communications, journalism, and library science	Social work	Other non- S&E fields
72 SUNY C. Plattsburgh	1,087	1,993	1,485	0	0	0	183	0	0	325
73 IN U. all campuses	153,625	1,985	707	0	5	0	127	159	0	987
74 U. MN all campuses	293,266	1,926	1,095	0	599	7	0	0	0	225
75 U. SC all campuses	63,044	1,905	992	189	188	0	58	20	458	0
76 Tufts U.	78,942	1,886	450	0	1,235	0	0	162	39	0
77 Clemson U.	62,552	1,816	1,624	0	26	0	17	0	0	149
78 WV U.	60,586	1,803	69	725	160	0	323	0	3	523
79 NM State U. all campuses	75,368	1,799	47	0	0	48	1,570	134	0	0
80 U. OK all campuses	75,318	1,796	1,368	0	135	0	85	28	0	180
81 U. NC Chapel Hill	280,678	1,754	487	0	51	0	210	1,006	0	0
82 U. Pittsburgh all campuses	345,625	1,749	1,273	0	113	0	210	0	0	153
83 Boston U.	203,947	1,708	245	0	340	0	421	0	627	75
84 Carnegie-Mellon U.	157,583	1,663	0	0	646	994	0	23	0	0
85 U. Dayton	47,327	1,627	1,482	0	145	0	0	0	0	0
86 U. Rochester	208,148	1,625	765	0	96	579	174	11	0	0
87 U. IL Chicago	168,063	1,617	1,462	0	6	0	85	64	0	0
88 U. CT all campuses	111,654	1,612	498	0	220	20	309	6	559	0
89 Drexel U.	49,271	1,591	11	0	76	0	220	163	0	1,121
90 Northern IL U.	6,892	1,547	446	0	0	7	0	82	1,012	0
91 Shaw U.	1,033	1,515	1,515	0	0	0	0	0	0	0
92 CUNY Brooklyn C.	2,798	1,460	617	0	268	0	361	197	0	17
93 U. PR Mayaguez Campus	9,596	1,411	1,411	0	0	0	0	0	0	0
94 Brigham Young U. all campuses	16,564	1,266	418	69	701	0	0	0	78	0
95 Northeastern IL U.	26	1,259	765	0	0	0	0	75	419	0
96 Marshall U. Graduate C.	12,802	1,191	1,030	0	49	0	112	0	0	0
97 Case Western Reserve U.	205,452	1,176	0	0	0	0	63	0	906	207
98 Georgetown U.	83,745	1,174	1,018	0	156	0	0	0	0	0
99 TX Christian U.	2,716	1,172	1,117	0	0	0	2	0	38	15
100 U. NV, Las Vegas	32,511	1,168	635	116	240	0	99	78	0	0
All other sampled institutions	14,369,056	57,568	29,696	1,561	7,820	387	5,138	1,406	3,326	5,423

NA = not available.

S&E = science and engineering.

NOTE: Detail may not add to total because some respondents reporting total federal non-S&E R&D expenditures did not break out these funds by non-S&E field.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.

TABLE A-17. Federally financed R&D expenditures at universities and colleges, by field of science and federal agency: FY 2003  
(Dollars in thousands)

Science and engineering field	Federal R&D expenditures	DOD	DOE	HHS	NASA	NSF	USDA	Other
All science and engineering	24,734,033	2,007,738	822,375	10,929,524	937,995	2,404,146	634,201	2,722,659
Computer sciences	936,484	297,063	29,405	21,119	28,164	290,728	2,114	101,248
Environmental sciences	1,439,843	90,988	71,942	22,250	182,001	343,648	25,296	391,622
Atmospheric sciences	297,486	19,890	15,908	2,016	85,395	57,526	1,199	71,635
Earth sciences	439,985	19,001	42,104	7,348	59,123	121,860	18,024	94,616
Oceanography	535,945	37,962	2,993	6,484	20,223	144,297	2,900	193,113
Environmental sciences, nec	166,427	14,135	10,937	6,402	15,700	18,246	3,162	31,636
Life sciences	14,645,014	274,025	123,865	9,756,344	100,591	393,555	537,560	1,171,759
Agricultural sciences	761,825	9,571	15,023	30,417	15,344	53,801	368,798	145,929
Biological sciences	5,017,208	96,979	63,928	3,427,779	41,144	295,019	135,387	338,523
Medical sciences	8,249,066	155,732	36,598	5,845,605	41,788	26,380	21,271	592,164
Life sciences, nec	616,915	11,013	8,264	413,715	2,315	16,592	12,042	91,087
Mathematical sciences	295,219	31,121	6,453	33,607	5,268	123,689	1,815	25,083
Physical sciences	2,352,648	244,729	302,730	304,248	279,773	558,746	6,009	189,467
Astronomy	271,505	8,845	7,069	107	124,916	40,416	15	16,697
Chemistry	816,056	71,379	51,143	263,209	14,978	191,368	3,943	66,637
Physics	1,088,184	143,103	227,401	29,362	80,241	284,595	2,010	95,214
Physical sciences, nec	176,903	20,798	15,275	8,538	59,026	40,569	41	10,086
Psychology	552,623	22,279	1,716	364,415	9,282	37,430	370	45,365
Social sciences	666,551	18,425	10,321	229,350	12,031	82,351	31,100	194,088
Economics	107,876	2,054	3,466	12,940	1,177	18,574	18,623	34,933
Political sciences	91,744	6,562	748	26,004	1,494	14,083	984	35,611
Sociology	182,518	3,097	2,150	95,543	939	23,664	4,382	33,649
Social sciences, nec	284,413	6,712	3,753	93,960	8,421	25,456	7,111	89,596
Sciences, nec	238,014	38,100	7,964	31,097	12,943	46,422	2,667	52,259
Engineering	3,607,637	989,491	265,950	158,329	307,817	525,584	27,125	551,354
Aeronautical/astronautical engineering	305,570	90,476	7,089	348	107,423	11,476	101	42,682
Bioengineering/biomedical engineering	190,498	19,897	1,622	72,520	5,269	23,756	4,362	32,751
Chemical engineering	247,980	28,721	46,503	21,807	14,684	61,089	2,963	29,755
Civil engineering	326,524	28,241	16,938	3,262	11,736	71,236	5,648	145,785
Electrical engineering	924,903	362,870	18,838	18,233	39,295	145,768	390	83,515
Mechanical engineering	532,586	142,321	77,405	11,417	37,909	59,025	706	59,663
Metallurgical/materials engineering	303,153	126,056	34,562	3,500	12,410	51,726	568	41,101
Engineering, nec	776,423	183,460	62,298	27,242	79,091	98,065	12,387	113,776

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation; USDA = Department of Agriculture; nec = not elsewhere classified.

NOTES: Agency detail may not add to total because some respondents reporting total federal agency data did not break out these data by field of science. Agency data may not add to total federal expenditures because some institutions did not break out their federal expenditures by federal agency.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2003.